



SEQUENCE LISTING

<110> Aguinalde, Anna Marie
Beyna, Amelia Joy
Cho, Ho Sung
Desjarlais, John Rudolph
Marshall, Shannon Alicia
Muchhal, Umesh
Villegas, Michael Francis Aquino
Zhukovsky, Eugene
Quesenberry, Michael Stephen

<120> INTERFERON VARIANTS WITH IMPROVED PROPERTIES

<130> A-71431-4

<140> US 10/820,467

<141> 2004-03-30

<150> US 60/477,246

<151> 2003-06-10

<150> US 60/415,541

<151> 2002-10-01

<150> US 60/489,725

<151> 2003-07-24

<150> US 10/676,705

<151> 2003-09-30

<160> 274

<170> PatentIn version 3.2

<210> 1

<211> 189

<212> PRT

<213> Homo sapiens

<400> 1

Met Ala Ser Pro Phe Ala Leu Leu Met Val Leu Val Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Leu Gly Cys Asp Leu Pro Glu Thr His Ser Leu
20 25 30

Asp Asn Arg Arg Thr Leu Met Leu Leu Ala Gln Met Ser Arg Ile Ser
35 40 45

Pro Ser Ser Cys Leu Met Asp Arg His Asp Phe Gly Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Pro Ala Ile Ser Val Leu
65 70 75 80

His Glu Leu Ile Gln Gln Ile Phe Asn Leu Phe Thr Thr Lys Asp Ser
85 90 95

Ser Ala Ala Trp Asp Glu Asp Leu Leu Asp Lys Phe Cys Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Glu Arg
115 120 125

Val Gly Glu Thr Pro Leu Met Asn Ala Asp Ser Ile Leu Ala Val Lys
130 135 140

Lys Tyr Phe Arg Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
165 170 175

Leu Ser Thr Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
180 185

<210> 2
<211> 165
<212> PRT
<213> Homo sapiens

<400> 2

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
 145 150 155 160

Ser Leu Arg Ser Lys Glu
 165

<210> 4
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 4

Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
 1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
 20 25 30

Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
 35 40 45

His Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Glu Glu
 50 55 60

Glu Phe Asp Gly His Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
 65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
 85 90 95

Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
 100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
 115 120 125

Val Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
 130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
 145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
 165 170 175

Phe Ser Thr Asn Leu Gln Lys Arg Leu Arg Arg Lys Asp

180

185

<210> 5
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 5

Met Ala Leu Pro Phe Val Leu Leu Met Ala Leu Val Val Leu Asn Cys
 1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
 20 25 30

Ser Asn Arg Arg Thr Leu Met Ile Met Ala Gln Met Gly Arg Ile Ser
 35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
 50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
 65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
 85 90 95

Ser Ala Thr Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu
 100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Met Met Gln Glu Val Gly
 115 120 125

Val Glu Asp Thr Pro Leu Met Asn Val Asp Ser Ile Leu Thr Val Arg
 130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
 145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
 165 170 175

Leu Ser Ala Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
 180 185

<210> 6
 <211> 189
 <212> PRT

<213> Homo sapiens

<400> 6

Met Ala Leu Pro Phe Ala Leu Leu Met Ala Leu Val Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Leu Asp Cys Asp Leu Pro Gln Thr His Ser Leu
20 25 30

Gly His Arg Arg Thr Met Met Leu Leu Ala Gln Met Arg Arg Ile Ser
35 40 45

Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Arg Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Glu Ala Ile Ser Val Leu
65 70 75 80

His Glu Val Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
85 90 95

Ser Val Ala Trp Asp Glu Arg Leu Leu Asp Lys Leu Tyr Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Val Trp
115 120 125

Val Gly Gly Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
165 170 175

Ser Ser Arg Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
180 185

<210> 7

<211> 189

<212> PRT

<213> Homo sapiens

<400> 7

Met Ala Arg Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
20 25 30

Arg Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Glu Phe Arg Phe Pro Glu Glu
50 55 60

Glu Phe Asp Gly His Gln Phe Gln Lys Thr Gln Ala Ile Ser Val Leu
65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
85 90 95

Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
115 120 125

Val Glu Glu Thr Pro Leu Met Asn Glu Asp Phe Ile Leu Ala Val Arg
130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
165 170 175

Phe Ser Thr Asn Leu Lys Lys Gly Leu Arg Arg Lys Asp
180 185

<210> 8
<211> 189
<212> PRT
<213> Homo sapiens

<400> 8

Met Ala Leu Thr Phe Tyr Leu Met Val Ala Leu Val Val Leu Ser Tyr
1 5 10 15

Lys Ser Phe Ser Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
20 25 30

Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Arg Arg Ile Ser
 35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Glu Phe Pro Gln Glu
 50 55 60

Glu Phe Asp Asp Lys Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
 65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
 85 90 95

Ser Ala Ala Leu Asp Glu Thr Leu Leu Asp Glu Phe Tyr Ile Glu Leu
 100 105 110

Asp Gln Gln Leu Asn Asp Leu Glu Val Leu Cys Asp Gln Glu Val Gly
 115 120 125

Val Ile Glu Ser Pro Leu Met Tyr Glu Asp Ser Ile Leu Ala Val Arg
 130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
 145 150 155 160

Ser Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
 165 170 175

Leu Ser Ile Asn Leu Gln Lys Arg Leu Lys Ser Lys Glu
 180 185

<210> 9
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 9

Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
 1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
 20 25 30

Gly Asn Arg Arg Ala Leu Ile Leu Leu Gly Gln Met Gly Arg Ile Ser
 35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Arg Ile Pro Gln Glu
 50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
85 90 95

Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
115 120 125

Val Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Ile Glu Arg Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
165 170 175

Phe Ser Thr Asn Leu Gln Lys Arg Leu Arg Arg Lys Asp
180 185

<210> 10
<211> 189
<212> PRT
<213> Homo sapiens

<400> 10

Met Ala Ser Pro Phe Ala Leu Leu Met Ala Leu Val Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Leu Gly Cys Asp Leu Pro Glu Thr His Ser Leu
20 25 30

Asp Asn Arg Arg Thr Leu Met Leu Leu Ala Gln Met Ser Arg Ile Ser
35 40 45

Pro Ser Ser Cys Leu Met Asp Arg His Asp Phe Gly Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Pro Ala Ile Ser Val Leu
65 70 75 80

His Glu Leu Ile Gln Gln Ile Phe Asn Leu Phe Thr Thr Lys Asp Ser
85 90 95

Ser Ala Ala Trp Asp Glu Asp Leu Leu Asp Lys Phe Cys Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Glu Arg
115 120 125

Val Gly Glu Thr Pro Leu Met Asn Ala Asp Ser Ile Leu Ala Val Lys
130 135 140

Lys Tyr Phe Arg Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
165 170 175

Leu Ser Thr Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
180 185

<210> 11
<211> 189
<212> PRT
<213> Homo sapiens

<400> 11

Met Ala Leu Pro Phe Ala Leu Met Met Ala Leu Val Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Leu Gly Cys Asn Leu Ser Gln Thr His Ser Leu
20 25 30

Asn Asn Arg Arg Thr Leu Met Leu Met Ala Gln Met Arg Arg Ile Ser
35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Glu Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
65 70 75 80

His Glu Met Met Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asn Ser
85 90 95

Ser Ala Ala Trp Asp Glu Thr Leu Leu Glu Lys Phe Tyr Ile Glu Leu
100 105 110

Phe Gln Gln Met Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
 115 120 125

Val Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Lys
 130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Met Glu Lys Lys Tyr Ser
 145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
 165 170 175

Phe Ser Thr Asn Leu Gln Lys Arg Leu Arg Arg Lys Asp
 180 185

<210> 12
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 12

Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
 1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
 20 25 30

Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
 35 40 45

His Phe Ser Cys Leu Lys Asp Arg Tyr Asp Phe Gly Phe Pro Gln Glu
 50 55 60

Val Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Ala Phe
 65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
 85 90 95

Ser Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Ile Glu Leu
 100 105 110

Phe Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Thr Gln Glu Val Gly
 115 120 125

Val Glu Glu Ile Ala Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
 130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Met Gly Lys Lys Tyr Ser
 145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
 165 170 175

Phe Ser Thr Asn Leu Gln Lys Gly Leu Arg Arg Lys Asp
 180 185

<210> 13
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 13

Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
 1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
 20 25 30

Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
 35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Leu Pro Gln Glu
 50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Thr Gln Ala Ile Ser Val Leu
 65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
 85 90 95

Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
 100 105 110

Tyr Gln Gln Leu Asn Asn Leu Glu Ala Cys Val Ile Gln Glu Val Gly
 115 120 125

Met Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
 130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
 145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
165 170 175

Phe Ser Thr Asn Leu Gln Lys Ile Leu Arg Arg Lys Asp
180 185

<210> 14
<211> 189
<212> PRT
<213> Homo sapiens

<400> 14

Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
20 25 30

Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
85 90 95

Ser Ala Thr Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
100 105 110

Asn Gln Gln Leu Asn Asp Met Glu Ala Cys Val Ile Gln Glu Val Gly
115 120 125

Val Glu Glu Thr Pro Leu Met Asn Val Asp Ser Ile Leu Ala Val Lys
130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
165 170 175

Leu Ser Lys Ile Phe Gln Glu Arg Leu Arg Arg Lys Glu
 180 185

<210> 15
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 15

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 16
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 16

Met Ser Thr Lys Pro Asp Met Ile Gln Lys Cys Leu Trp Leu Glu Ile
 1 5 10 15

Leu Met Gly Ile Phe Ile Ala Gly Thr Leu Ser Leu Asp Cys Asn Leu
 20 25 30

Leu Asn Val His Leu Arg Arg Val Thr Trp Gln Asn Leu Arg His Leu
 35 40 45

Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys Leu Arg Glu Asn Ile
 50 55 60

Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr Thr Gln Pro Met Lys
 65 70 75 80

Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser Leu Gln Ala Phe Asn
 85 90 95

Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys Glu Arg His Leu Lys
 100 105 110

Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys
 115 120 125

Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met Lys Glu Met Lys Glu
 130 135 140

Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro Gln Leu Ser Ser Leu
 145 150 155 160

Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn Phe Leu Lys Glu Lys
 165 170 175

Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg Val Glu Ile Arg Arg
 180 185 190

Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu Phe Arg Arg Lys
 195 200 205

<210> 17
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 17

Met Ile Ile Lys His Phe Phe Gly Thr Val Leu Val Leu Leu Ala Ser

1	5	10	15
Thr Thr Ile Phe Ser Leu Asp Leu Lys Leu Ile Ile Phe Gln Gln Arg	20	25	30
Gln Val Asn Gln Glu Ser Leu Lys Leu Leu Asn Lys Leu Gln Thr Leu	35	40	45
Ser Ile Gln Gln Cys Leu Pro His Arg Lys Asn Phe Leu Leu Pro Gln	50	55	60
Lys Ser Leu Ser Pro Gln Gln Tyr Gln Lys Gly His Thr Leu Ala Ile	65	70	75
Leu His Glu Met Leu Gln Gln Ile Phe Ser Leu Phe Arg Ala Asn Ile	85	90	95
Ser Leu Asp Gly Trp Glu Glu Asn His Thr Glu Lys Phe Leu Ile Gln	100	105	110
Leu His Gln Gln Leu Glu Tyr Leu Glu Ala Leu Met Gly Leu Glu Ala	115	120	125
Glu Lys Leu Ser Gly Thr Leu Gly Ser Asp Asn Leu Arg Leu Gln Val	130	135	140
Lys Met Tyr Phe Arg Arg Ile His Asp Tyr Leu Glu Asn Gln Asp Tyr	145	150	155
Ser Thr Cys Ala Trp Ala Ile Val Gln Val Glu Ile Ser Arg Cys Leu	165	170	175
Phe Phe Val Phe Ser Leu Thr Glu Lys Leu Ser Lys Gln Gly Arg Pro	180	185	190
Leu Asn Asp Met Lys Gln Glu Leu Thr Thr Glu Phe Arg Ser Pro Arg	195	200	205
<210> 18			
<211> 195			
<212> PRT			
<213> Homo sapiens			
<400> 18			
Met Ala Leu Leu Phe Pro Leu Leu Ala Ala Leu Val Met Thr Ser Tyr	1	5	10
			15

Ser Pro Val Gly Ser Leu Gly Cys Asp Leu Pro Gln Asn His Gly Leu
 20 25 30

Leu Ser Arg Asn Thr Leu Val Leu Leu His Gln Met Arg Arg Ile Ser
 35 40 45

Pro Phe Leu Cys Leu Lys Asp Arg Arg Asp Phe Arg Phe Pro Gln Glu
 50 55 60

Met Val Lys Gly Ser Gln Leu Gln Lys Ala His Val Met Ser Val Leu
 65 70 75 80

His Glu Met Leu Gln Gln Ile Phe Ser Leu Phe His Thr Glu Arg Ser
 85 90 95

Ser Ala Ala Trp Asn Met Thr Leu Leu Asp Gln Leu His Thr Gly Leu
 100 105 110

His Gln Gln Leu Gln His Leu Glu Thr Cys Leu Leu Gln Val Val Gly
 115 120 125

Glu Gly Glu Ser Ala Gly Ala Ile Ser Ser Pro Ala Leu Thr Leu Arg
 130 135 140

Arg Tyr Phe Gln Gly Ile Arg Val Tyr Leu Lys Glu Lys Lys Tyr Ser
 145 150 155 160

Asp Cys Ala Trp Glu Val Val Arg Met Glu Ile Met Lys Ser Leu Phe
 165 170 175

Leu Ser Thr Asn Met Gln Glu Arg Leu Arg Ser Lys Asp Arg Asp Leu
 180 185 190

Gly Ser Ser
 195

<210> 19
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 19

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 20
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 20

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln

35 40 45
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60
 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80
 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95
 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110
 Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125
 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140
 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160
 Thr Gly Tyr Leu Arg Asn
 165

 <210> 21
 <211> 166
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 21

 Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15
 Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30
 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 22
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 22

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 23
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 23

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 24
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 24

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu

145 150 155 160
 Thr Gly Tyr Leu Arg Asn
 165

 <210> 25
 <211> 166
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 25

 Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

 Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

 Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

 Thr Gly Tyr Leu Arg Asn
 165

<210> 26
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 26

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Arg Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 27
 <211> 180
 <212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 27

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 28

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 28

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 29

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 29

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 30
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 30

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
 35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 31
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 31

Cys Asp Leu Pro Glu Thr His Ser Leu Asp Asn Arg Arg Thr Leu Met
 1 5 10 15

Leu Leu Ala Gln Met Ser Arg Ile Ser Pro Ser Ser Cys Leu Met Asp
 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
 35 40 45

Gln Lys Ala Pro Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Ile
 50 55 60

Phe Asn Leu Phe Thr Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Asp
 65 70 75 80

Leu Leu Asp Lys Phe Cys Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met
 100 105 110

Asn Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr
 115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Leu Ser Leu Ser Thr Asn Leu Gln Glu
 145 150 155 160

Arg Leu Arg Arg Lys Glu
 165

<210> 32
 <211> 165
 <212> PRT
 <213> Homo sapiens

<400> 32

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
 1 5 10 15

Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys Asp
 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
 35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
 50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
 65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145 150 155 160

Leu Arg Ser Lys Glu
165

<210> 33
<211> 165
<212> PRT
<213> Homo sapiens

<400> 33

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
 115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
 130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
 145 150 155 160

Leu Arg Ser Lys Glu
 165

<210> 34
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 34

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser His Phe Ser Cys Leu Lys Asp
 20 25 30

Arg His Asp Phe Gly Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
 50 55 60

Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
 100 105 110

Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Leu Ser Phe Ser Thr Asn Leu Gln Lys
 145 150 155 160

Arg Leu Arg Arg Lys Asp
165

<210> 35
<211> 166
<212> PRT
<213> Homo sapiens

<400> 35

Cys Asp Leu Pro Gln Thr His Ser Leu Ser Asn Arg Arg Thr Leu Met
1 5 10 15

Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Met Met Gln Glu Val Gly Val Glu Asp Thr Pro Leu Met
100 105 110

Asn Val Asp Ser Ile Leu Thr Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Ala Asn Leu Gln Glu
145 150 155 160

Arg Leu Arg Arg Lys Glu
165

<210> 36
<211> 166
<212> PRT
<213> Homo sapiens

<400> 36

Cys Asp Leu Pro Gln Thr His Ser Leu Gly His Arg Arg Thr Met Met
1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Ala Ile Ser Val Leu His Glu Val Ile Gln Gln Thr
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Val Ala Trp Asp Glu Arg
65 70 75 80

Leu Leu Asp Lys Leu Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Met Gln Glu Val Trp Val Gly Gly Thr Pro Leu Met
100 105 110

Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Ser Ser Arg Asn Leu Gln Glu
145 150 155 160

Arg Leu Arg Arg Lys Glu
165

<210> 37

<211> 166

<212> PRT

<213> Homo sapiens

<400> 37

Cys Asp Leu Pro Gln Thr His Ser Leu Arg Asn Arg Arg Ala Leu Ile
1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Glu Phe Arg Phe Pro Glu Glu Glu Phe Asp Gly His Gln Phe
 35 40 45

Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
 50 55 60

Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
 100 105 110

Asn Glu Asp Phe Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Lys Lys
 145 150 155 160

Gly Leu Arg Arg Lys Asp
 165

<210> 38
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 38

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
 20 25 30

Arg His Asp Phe Glu Phe Pro Gln Glu Glu Phe Asp Asp Lys Gln Phe
 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Leu Asp Glu Thr

Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125

Leu Tyr Leu Ile Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Leu Ser Phe Ser Thr Asn Leu Gln Lys
 145 150 155 160

Arg Leu Arg Arg Lys Asp
 165

<210> 40
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 40

Cys Asp Leu Pro Glu Thr His Ser Leu Asp Asn Arg Arg Thr Leu Met
 1 5 10 15

Leu Leu Ala Gln Met Ser Arg Ile Ser Pro Ser Ser Cys Leu Met Asp
 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
 35 40 45

Gln Lys Ala Pro Ala Ile Ser Val Leu His Glu Leu Ile Gln Gln Ile
 50 55 60

Phe Asn Leu Phe Thr Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Asp
 65 70 75 80

Leu Leu Asp Lys Phe Cys Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met
 100 105 110

Asn Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr
 115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Leu Ser Leu Ser Thr Asn Leu Gln Glu

145 150 155 160

Arg Leu Arg Arg Lys Glu
165

<210> 41
<211> 166
<212> PRT
<213> Homo sapiens

<400> 41

Cys Asn Leu Ser Gln Thr His Ser Leu Asn Asn Arg Arg Thr Leu Met
1 5 10 15

Leu Met Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Glu Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Met Gln Gln Thr
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Glu Lys Phe Tyr Ile Glu Leu Phe Gln Gln Met Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
100 105 110

Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Met Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145 150 155 160

Arg Leu Arg Arg Lys Asp
165

<210> 42
<211> 166
<212> PRT

<213> Homo sapiens

<400> 42

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser His Phe Ser Cys Leu Lys Asp
20 25 30

Arg Tyr Asp Phe Gly Phe Pro Gln Glu Val Phe Asp Gly Asn Gln Phe
35 40 45

Gln Lys Ala Gln Ala Ile Ser Ala Phe His Glu Met Ile Gln Gln Thr
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Ile Glu Leu Phe Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Ile Ala Leu Met
100 105 110

Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Met Gly Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys
145 150 155 160

Gly Leu Arg Arg Lys Asp
165

<210> 43

<211> 166

<212> PRT

<213> Homo sapiens

<400> 43

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Gly Leu Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
 35 40 45

Gln Lys Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
 50 55 60

Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser
 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asn Leu
 85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Met Glu Glu Thr Pro Leu Met
 100 105 110

Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Leu Ser Phe Ser Thr Asn Leu Gln Lys
 145 150 155 160

Ile Leu Arg Arg Lys Asp
 165

<210> 44
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 44

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
 1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser
65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Met
85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
100 105 110

Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Lys Ile Phe Gln Glu
145 150 155 160

Arg Leu Arg Arg Lys Glu
165

<210> 45
<211> 179
<212> PRT
<213> Homo sapiens

<400> 45

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys
65 70 75 80

Glu Arg His Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu Tyr
85 90 95

Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met Lys
100 105 110

Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro Gln
 115 120 125

Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn Phe
 130 135 140

Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg Val
 145 150 155 160

Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu Phe
 165 170 175

Arg Arg Lys

<210> 46
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 46

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 47
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 47

Cys Tyr Leu Ser Arg Lys Leu Met Leu Asp Ala Arg Glu Asn Leu Lys
 1 5 10 15

Leu Leu Asp Arg Met Asn Arg Leu Ser Pro His Ser Cys Leu Gln Asp
 20 25 30

Arg Lys Asp Phe Gly Leu Pro Gln Glu Met Val Glu Gly Asp Gln Leu
 35 40 45

Gln Lys Asp Gln Ala Phe Pro Val Leu Tyr Glu Met Leu Gln Gln Ser
 50 55 60

Phe Asn Leu Phe Tyr Thr Glu His Ser Ser Ala Ala Trp Asp Thr Thr
 65 70 75 80

Leu Leu Glu Gln Leu Cys Thr Gly Leu Gln Gln Gln Leu Asp His Leu
 85 90 95

Asp Thr Cys Arg Gly Met Asp Pro Ile Val Thr Val Lys Lys Tyr Phe
 100 105 110

Gln Gly Ile Tyr Asp Tyr Leu Gln Glu Lys Gly Tyr Ser Asp Cys Ala
 115 120 125

Trp Glu Ile Val Arg Val Glu Met Met Arg Ala Leu Thr Val Ser Thr
 130 135 140

Thr Leu Gln Lys Arg Leu Thr Lys
 145 150

<210> 48
 <211> 165

<212> PRT
<213> Homo sapiens

<400> 48

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145 150 155 160

Leu Arg Ser Lys Glu
165

<210> 49
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 49

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 50
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 50

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln

35 40 45
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60
 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80
 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95
 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110
 Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125
 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140
 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160
 Thr Gly Tyr Leu Arg Asn
 165

 <210> 51
 <211> 166
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 51

 Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15
 Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30
 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 52
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 52

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 53
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 53

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 54
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 54

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu

145 150 155 160

 Thr Gly Tyr Leu Arg Asn
 165

 <210> 55
 <211> 166
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 55

 Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

 Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

 Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

 Thr Gly Tyr Leu Arg Asn
 165

<210> 56
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 56

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 57
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 57

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 58

<211> 166

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 58

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 59
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 59

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 60
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 60

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 61
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 61

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr

	100		105		110
Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg	115		120		125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr	130		135		140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu	145		150		155
Thr Gly Tyr Leu Arg Asn	165				
<210> 62					
<211> 166					
<212> PRT					
<213> Artificial					
<220>					
<223> synthetic					
<400> 62					
Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln	1		5		10
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu	20		25		30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln	35		40		45
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln	50		55		60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn	65		70		75
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn	85		90		95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr	100		105		110
Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg	115		120		125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 63
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 63

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 64
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 64

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 65
<211> 166

<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 65

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 66
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 66

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 67
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 67

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 68
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 68

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln

50 55 60
 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80
 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95
 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110
 Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125
 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140
 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160
 Thr Gly Tyr Leu Arg Asn
 165

<210> 69
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 69

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15
 Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30
 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60
 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 70
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 70

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 71
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 71

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 72
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 72

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn

<210> 73
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 73

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 74
 <211> 166
 <212> PRT
 <213> Artificial

<220>

<223> synthetic

<400> 74

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 75

<211> 166

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 75

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln

1 5 10 15
 Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30
 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60
 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80
 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95
 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110
 Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125
 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140
 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160
 Thr Gly Tyr Leu Arg Asn
 165

<210> 76
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 76

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 77
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 77

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 78
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 78

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 79
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 79

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
 100 105 110

Arg Gly Lys Leu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg

115	120	125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr		
130	135	140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu		
145	150	155
160		
Thr Gly Tyr Leu Arg Asn		
165		
<210> 80		
<211> 166		
<212> PRT		
<213> Artificial		
<220>		
<223> synthetic		
<400> 80		
Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln		
1	5	10
15		
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu		
20	25	30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln		
35	40	45
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln		
50	55	60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn		
65	70	75
80		
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn		
85	90	95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr		
100	105	110
Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg		
115	120	125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr		
130	135	140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 81
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 81

Met Ser Tyr Asn Gln Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 82
 <211> 166
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 82

Met Ser Tyr Asn Leu Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
 1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 100 105 110

Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
 115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 145 150 155 160

Thr Gly Tyr Leu Arg Asn
 165

<210> 83
 <211> 166
 <212> PRT
 <213> Artificial

<220>

<223> synthetic

<400> 83

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 84

<211> 166

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 84

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 85
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 85

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80

Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95

His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr
100 105 110

Arg Gly Lys Glu Met Ser Ser Arg His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 86
<211> 166
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 86

Met Ser Tyr Asn Gln Leu Gly Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15

Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30

Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Lys Gln
35 40 45

Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60

Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn

65		70		75		80
Glu Thr Ile Val	Glu Asn Leu Leu Ala	Asn Val Tyr His Gln Ile Asn				
	85	90			95	
His Leu Lys Thr Val	Leu Glu Glu Lys Leu Glu Lys Glu Asp Asn Thr					
	100	105			110	
Arg Gly Lys Glu Met Ser Ser	Arg His Leu Lys Arg Tyr Tyr Gly Arg					
	115	120			125	
Ile Leu His Tyr Leu Lys	Ala Lys Glu Tyr Ser His Cys Ala Trp Thr					
	130	135			140	
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu						
145	150		155			160
Thr Gly Tyr Leu Arg Asn						
	165					
<210> 87						
<211> 166						
<212> PRT						
<213> Artificial						
<220>						
<223> synthetic						
<400> 87						
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln						
1	5		10			15
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu						
	20		25			30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Ser Gln						
	35		40			45
Gln Ser Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln						
	50		55			60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn						
65		70		75		80
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn						
	85		90			95

His Leu Lys Thr Val Leu Glu Glu Lys Ser Glu Lys Glu Asp Ser Thr
100 105 110

Arg Gly Lys Ser Met Ser Ser Ser His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140

Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160

Thr Gly Tyr Leu Arg Asn
165

<210> 88
<211> 180
<212> PRT
<213> Homo sapiens

<400> 88

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 89
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 89

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Arg Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 91
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 91

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Gln Pro Arg Glu Cys
20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 92
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 92

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 93
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 93

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 94

<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 94

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Gln Pro Arg Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 95
<211> 180
<212> PRT
<213> Artificial

<220>

<223> synthetic

<400> 95

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Gln Pro Arg Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 , 175

Phe Arg Arg Lys
180

<210> 96

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 96

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Gln Pro Arg Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 97

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 97

Leu Asp Cys Asn Leu Leu Asn Asn His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Gln Pro Arg Glu Cys
 20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 98
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 98

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 99
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 99

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 100
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 100

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln

35 40 45
 Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60
 Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80
 Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95
 Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110
 Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125
 Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140
 Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160
 Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175
 Phe Arg Arg Lys
 180
 <210> 101
 <211> 180
 <212> PRT
 <213> Artificial
 <220>
 <223> synthetic
 <400> 101
 Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
 1 5 10 15
 Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30
 Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
 35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 102
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 102

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
 35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 103
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 103

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 104
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 104

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu

	85		90		95										
Asp	Leu	Asn	Gln	Cys	Leu	Glu	Glu	Asp	Glu	Asn	Glu	Asn	Glu	Asp	Met
			100					105						110	
Lys	Glu	Met	Lys	Glu	Asn	Glu	Met	Lys	Pro	Ser	Glu	Ala	Arg	Val	Pro
		115					120					125			
Gln	Leu	Ser	Ser	Leu	Glu	Leu	Arg	Arg	Tyr	Phe	His	Arg	Ile	Asp	Asn
	130					135					140				
Phe	Leu	Lys	Glu	Lys	Lys	Tyr	Ser	Asp	Cys	Ala	Trp	Glu	Ile	Val	Arg
145					150					155					160
Val	Glu	Ile	Arg	Arg	Cys	Leu	Tyr	Tyr	Phe	Tyr	Lys	Phe	Thr	Ala	Leu
				165					170					175	
Phe	Arg	Arg	Lys												
			180												
<210>	105														
<211>	180														
<212>	PRT														
<213>	Artificial														
<220>															
<223>	synthetic														
<400>	105														
Leu	Asp	Cys	Asn	Leu	Leu	Asn	Val	His	Leu	Arg	Arg	Val	Thr	Trp	Gln
1				5					10					15	
Asn	Leu	Arg	His	Leu	Ser	Ser	Met	Ser	Asn	Ser	Phe	Pro	Val	Glu	Cys
			20					25					30		
Leu	Arg	Glu	Asn	Ile	Ala	Phe	Glu	Leu	Pro	Gln	Glu	Phe	Leu	Gln	Gln
		35					40					45			
Thr	Gln	Pro	Asn	Lys	Arg	Asp	Ile	Lys	Lys	Ala	Phe	Tyr	Glu	Met	Ser
	50					55					60				
Leu	Gln	Ala	Phe	Asn	Ile	Phe	Ser	Gln	His	Thr	Ser	Lys	Ala	Trp	Lys
65					70				75						80
Glu	Arg	His	Leu	Lys	Gln	Ile	Gln	Ile	Gly	Leu	Asp	Gln	Gln	Ala	Glu
				85					90					95	

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 106
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 106

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Ala Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 107
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 107

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 108
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 108

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn

130 135 140
 Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160
 Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175
 Phe Arg Arg Lys
 180

 <210> 109
 <211> 180
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 109
 Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15
 Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30
 Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
 35 40 45
 Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60
 Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys
 65 70 75 80
 Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95
 Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110
 Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125
 Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 110
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 110

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
 35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Ala Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 111
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 111

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 112
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 112

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys

180

<210> 113
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 113

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 114
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 114

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
 35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Ala Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 115
 <211> 180
 <212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 115

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 116

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 116

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 117

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 117

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 118
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 118

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
 20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
 35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
 50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
 65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
 85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
 100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
 115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
 130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
 145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
 165 170 175

Phe Arg Arg Lys
 180

<210> 119
 <211> 180
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 119

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln
 1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Gln Pro Arg Glu Cys

20					25					30					
Leu	Arg	Glu	Asn	Asn	Ala	Phe	Glu	Leu	Pro	Gln	Glu	Phe	Leu	Gln	Tyr
		35					40					45			
Thr	Gln	Pro	Met	Lys	Arg	Asp	Ile	Lys	Lys	Ala	Phe	Tyr	Glu	Met	Ser
	50					55					60				
Leu	Gln	Ala	Phe	Asn	Ile	Phe	Ser	Gln	His	Thr	Ser	Lys	Ala	Trp	Lys
65					70					75					80
Glu	Arg	His	Leu	Lys	Gln	Ile	Gln	Ile	Gly	Leu	Asp	Gln	Gln	Ala	Glu
				85					90					95	
Asp	Leu	Asn	Gln	Cys	Leu	Glu	Glu	Asp	Glu	Asn	Glu	Asn	Glu	Asp	Met
			100					105					110		
Lys	Glu	Met	Lys	Glu	Asn	Glu	Met	Lys	Pro	Ser	Glu	Ala	Arg	Val	Pro
		115					120						125		
Gln	Leu	Ser	Ser	Leu	Glu	Leu	Arg	Arg	Tyr	Phe	His	Arg	Ile	Asp	Asn
	130						135					140			
Phe	Leu	Lys	Glu	Lys	Lys	Tyr	Ser	Asp	Cys	Ala	Trp	Glu	Ile	Val	Arg
145					150					155					160
Val	Glu	Ile	Arg	Arg	Ala	Leu	Ser	Tyr	Phe	Thr	Lys	Phe	Thr	Ala	Leu
				165					170					175	
Phe	Arg	Arg	Lys												
			180												
<210>	120														
<211>	180														
<212>	PRT														
<213>	Artificial														
<220>															
<223>	synthetic														
<400>	120														
Leu	Asp	Cys	Asn	Leu	Leu	Asn	Val	His	Leu	Arg	Arg	Val	Thr	Arg	Gln
1				5					10					15	
Asn	Leu	Arg	His	Leu	Ser	Ser	Met	Ser	Asn	Ser	Phe	Pro	Val	Glu	Cys
			20					25					30		

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Gln
35 40 45

Thr Gln Pro Asn Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Thr Gly Leu Asp Gln Gln Ala Glu
85 90 95

Asp Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Ala Glu Ile Arg Arg Ala Leu Ser Tyr Phe Thr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 121
<211> 180
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 121

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 122

<211> 180

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 122

Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Arg Gln
1 5 10 15

Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys
20 25 30

Leu Arg Glu Asn Asn Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr
35 40 45

Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser
50 55 60

Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr Ser Lys Ala Trp Lys
65 70 75 80

Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu
85 90 95

Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met
100 105 110

Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro
115 120 125

Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn
130 135 140

Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg
145 150 155 160

Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu
165 170 175

Phe Arg Arg Lys
180

<210> 123
<211> 9
<212> PRT
<213> Homo sapiens

<400> 123

Tyr Asn Leu Leu Gly Phe Leu Gln Arg
1 5

<210> 124
<211> 9
<212> PRT
<213> Homo sapiens

<400> 124

Leu Leu Gly Phe Leu Gln Arg Ser Ser
1 5

<210> 125
<211> 9
<212> PRT
<213> Homo sapiens

<400> 125

Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5

<210> 126

<211> 9

<212> PRT

<213> Homo sapiens

<400> 126

Leu Gln Arg Ser Ser Asn Phe Gln Cys
1 5

<210> 127

<211> 9

<212> PRT

<213> Homo sapiens

<400> 127

Phe Gln Cys Gln Lys Leu Leu Trp Gln
1 5

<210> 128

<211> 9

<212> PRT

<213> Homo sapiens

<400> 128

Trp Gln Leu Asn Gly Arg Leu Glu Tyr
1 5

<210> 129

<211> 9

<212> PRT

<213> Homo sapiens

<400> 129

Tyr Cys Leu Lys Asp Arg Met Asn Phe
1 5

<210> 130

<211> 9

<212> PRT

<213> Homo sapiens

<400> 130

Met Asn Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 131
<211> 9
<212> PRT
<213> Homo sapiens

<400> 131

Leu Gln Gln Phe Gln Lys Glu Asp Ala
1 5

<210> 132
<211> 9
<212> PRT
<213> Homo sapiens

<400> 132

Leu Thr Ile Tyr Glu Met Leu Gln Asn
1 5

<210> 133
<211> 9
<212> PRT
<213> Homo sapiens

<400> 133

Tyr Glu Met Leu Gln Asn Ile Phe Ala
1 5

<210> 134
<211> 9
<212> PRT
<213> Homo sapiens

<400> 134

Leu Gln Asn Ile Phe Ala Ile Phe Arg
1 5

<210> 135
<211> 9
<212> PRT
<213> Homo sapiens

<400> 135

Phe Arg Gln Asp Ser Ser Ser Thr Gly
1 5

<210> 136
<211> 9
<212> PRT
<213> Homo sapiens

<400> 136

Trp Asn Glu Thr Ile Val Glu Asn Leu
1 5

<210> 137
<211> 9
<212> PRT
<213> Homo sapiens

<400> 137

Ile Asn His Leu Lys Thr Val Leu Glu
1 5

<210> 138
<211> 9
<212> PRT
<213> Homo sapiens

<400> 138

Leu Lys Arg Tyr Tyr Gly Arg Ile Leu
1 5

<210> 139
<211> 9
<212> PRT
<213> Homo sapiens

<400> 139

Tyr Tyr Gly Arg Ile Leu His Tyr Leu
1 5

<210> 140
<211> 9
<212> PRT
<213> Homo sapiens

<400> 140

Ile Leu His Tyr Leu Lys Ala Lys Glu
1 5

<210> 141
<211> 9
<212> PRT
<213> Homo sapiens

<400> 141

Leu His Tyr Leu Lys Ala Lys Glu Tyr
1 5

<210> 142

<211> 9
<212> PRT
<213> Homo sapiens

<400> 142

Trp Thr Ile Val Arg Val Glu Ile Leu
1 5

<210> 143
<211> 9
<212> PRT
<213> Homo sapiens

<400> 143

Ile Val Arg Val Glu Ile Leu Arg Asn
1 5

<210> 144
<211> 9
<212> PRT
<213> Homo sapiens

<400> 144

Val Arg Val Glu Ile Leu Arg Asn Phe
1 5

<210> 145
<211> 9
<212> PRT
<213> Homo sapiens

<400> 145

Val Glu Ile Leu Arg Asn Phe Tyr Phe
1 5

<210> 146
<211> 9
<212> PRT
<213> Homo sapiens

<400> 146

Leu Arg Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 147
<211> 9
<212> PRT
<213> Homo sapiens

<400> 147

Phe Tyr Phe Ile Asn Arg Leu Thr Gly
1 5

<210> 148
<211> 9
<212> PRT
<213> Homo sapiens

<400> 148

Phe Ile Asn Arg Leu Thr Gly Tyr Leu
1 5

<210> 149
<211> 9
<212> PRT
<213> Homo sapiens

<400> 149

Ile Asn Arg Leu Thr Gly Tyr Leu Arg
1 5

<210> 150'
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 150

Trp Ser Leu Asn Gly Arg Leu Glu Tyr
1 5

<210> 151
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 151

Trp Asn Leu Asn Gly Arg Leu Glu Tyr
1 5

<210> 152
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 152

Trp Asp Leu Asn Gly Arg Leu Glu Tyr
1 5

<210> 153

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 153

Trp Glu Leu Asn Gly Arg Leu Glu Tyr
1 5

<210> 154

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 154

Trp His Leu Asn Gly Arg Leu Glu Tyr
1 5

<210> 155

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 155

Trp Lys Val Asn Gly Arg Leu Glu Tyr
1 5

<210> 156

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 156

Trp Gln Val Asn Gly Arg Leu Glu Tyr
1 5

<210> 157
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 157

Trp Gln Phe Ser Gly Arg Leu Glu Tyr
1 5

<210> 158
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 158

Trp Gln Phe Thr Gly Arg Leu Glu Tyr
1 5

<210> 159
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 159

Trp Gln Phe Gly Gly Arg Leu Glu Tyr
1 5

<210> 160
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 160

Trp Gln Leu Ser Gly Arg Leu Glu Tyr
1 5

<210> 161
<211> 9
<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 161

Trp Gln Leu Thr Gly Arg Leu Glu Tyr
1 5

<210> 162

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 162

Trp Gln Leu Gly Gly Arg Leu Glu Tyr
1 5

<210> 163

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 163

Trp Gln Leu Asn Ser Gln Leu Glu Tyr
1 5

<210> 164

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 164

Gln Ser Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 165

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 165

Gln Asp Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 166

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 166

Met Ser Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 167

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 167

Met Thr Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 168

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 168

Met Gly Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 169

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 169

Met Asp Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 170
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 170

Met Glu Phe Asp Ile Pro Glu Glu Ile
1 5

<210> 171
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 171

Met Asn Tyr Ser Ile Pro Glu Glu Ile
1 5

<210> 172
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 172

Met Asn Tyr Asn Ile Pro Glu Glu Ile
1 5

<210> 173
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 173

Met Asn Tyr Glu Ile Pro Glu Glu Ile
1 5

<210> 174
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 174

Met Asn Tyr Gln Ile Pro Glu Glu Ile
1 5

<210> 175
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 175

Met Asn Phe Ser Ile Pro Glu Glu Ile
1 5

<210> 176
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 176

Met Asn Phe Asn Ile Pro Glu Glu Ile
1 5

<210> 177
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 177

Met Asn Phe Glu Ile Pro Glu Glu Ile
1 5

<210> 178
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 178

Met Asn Phe Gln Ile Pro Glu Glu Ile
1 5

<210> 179
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 179

Met Asn Phe Asp Ile Pro Glu Ser Leu
1 5

<210> 180
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 180

Met Asn Phe Asp Ile Pro Glu Ser Val
1 5

<210> 181
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 181

Met Asn Phe Asp Ile Pro Glu Asn Leu
1 5

<210> 182
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 182

Met Asn Phe Asp Ile Pro Glu Asn Val
1 5

<210> 183
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 183

Met Asn Phe Asp Ile Pro Glu Asp Leu
1 5

<210> 184
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 184

Met Asn Phe Asp Ile Pro Glu Asp Val
1 5

<210> 185
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 185

Met Asn Phe Asp Ile Pro Glu Gln Leu
1 5

<210> 186
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 186

Met Asn Phe Asp Ile Pro Glu Gln Val
1 5

<210> 187
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 187

Met Asn Phe Asp Ile Pro Glu His Leu
1 5

<210> 188
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 188

Met Asn Phe Asp Ile Pro Glu His Val
1 5

<210> 189
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 189

Met Asn Phe Asp Ile Pro Glu Arg Leu
1 5

<210> 190
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 190

Met Asn Phe Asp Ile Pro Glu Arg Val
1 5

<210> 191
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 191

Met Asn Phe Asp Ile Pro Glu Lys Leu
1 5

<210> 192
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 192

Met Asn Phe Asp Ile Pro Glu Lys Val
1 5

<210> 193
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 193

Met Asn Phe Asp Ile Pro Glu Glu Leu
1 5

<210> 194
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 194

Met Asn Phe Asp Ile Pro Glu Glu Val
1 5

<210> 195
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 195

His Asp Met Leu Gln Asn Ile Phe Ala
1 5

<210> 196

<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 196

Tyr Ser Gln Leu Gln Asn Ile Phe Ala
1 5

<210> 197
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 197

Tyr Ser Leu Leu Gln Asn Ile Phe Ala
1 5

<210> 198
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 198

Tyr Ser Val Leu Gln Asn Ile Phe Ala
1 5

<210> 199
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 199

Tyr Ser Phe Leu Gln Asn Ile Phe Ala
1 5

<210> 200
<211> 9
<212> PRT
<213> Artificial

<220>

<223> synthetic

<400> 200

Tyr Glu Gln Leu Gln Asn Ile Phe Ala
1 5

<210> 201

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 201

Tyr Glu Met Leu Gln Asn Ile Tyr Thr
1 5

<210> 202

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 202

Tyr Glu Met Leu Gln Asn Ile Trp Thr
1 5

<210> 203

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 203

Tyr Glu Met Leu Gln Asn Ile Phe Thr
1 5

<210> 204

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 204

Trp Ser Ile Val Arg Val Glu Ile Leu

1 5

<210> 205
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 205

Trp Thr Ile Val Arg Val Ser Ile Leu
1 5

<210> 206
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 206

Trp Thr Ile Val Arg Val Glu Met Met
1 5

<210> 207
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 207

Trp Thr Ile Val Arg Val Glu Met Val
1 5

<210> 208
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 208

Trp Thr Ile Val Arg Val Glu Met Phe
1 5

<210> 209
<211> 9

<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 209

Trp Thr Ile Val Arg Val Glu Leu Phe
1 5

<210> 210
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 210

Trp Thr Ile Val Arg Val Glu Val Phe
1 5

<210> 211
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 211

Trp Thr Ile Val Arg Val Glu Phe Phe
1 5

<210> 212
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 212

Trp Thr Ile Val Arg Val Glu Ile Met
1 5

<210> 213
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 213

Trp Thr Ile Val Arg Val Glu Ile Val
1 5

<210> 214

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 214

Trp Thr Ile Val Arg Val Glu Ile Phe
1 5

<210> 215

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 215

Met Asn Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 216

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 216

Met Glu Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 217

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 217

Met Gln Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 218
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 218

Met His Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 219
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 219

Met Lys Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 220
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 220

Leu Asn Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 221
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 221

Leu Glu Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 222
<211> 9
<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 222

Leu Gln Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 223

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 223

Leu His Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 224

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 224

Leu Lys Asn Phe Tyr Phe Ile Asn Arg
1 5

<210> 225

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 225

Leu Arg Ser Phe Tyr Phe Ile Asn Arg
1 5

<210> 226

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 226

Leu Arg Thr Phe Tyr Phe Ile Asn Arg
1 5

<210> 227

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 227

Leu Arg Gly Phe Tyr Phe Ile Asn Arg
1 5

<210> 228

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 228

Leu Arg Asp Phe Tyr Phe Ile Asn Arg
1 5

<210> 229

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 229

Leu Arg Glu Phe Tyr Phe Ile Asn Arg
1 5

<210> 230

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 230

Leu Arg Gln Phe Tyr Phe Ile Asn Arg
1 5

<210> 231
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 231

Leu Arg His Phe Tyr Phe Ile Asn Arg
1 5

<210> 232
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 232

Leu Arg Lys Phe Tyr Phe Ile Asn Arg
1 5

<210> 233
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 233

Leu Arg Asn Met Tyr Phe Ile Asn Arg
1 5

<210> 234
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 234

Leu Arg Asn Ile Tyr Phe Ile Asn Arg
1 5

<210> 235
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 235

Leu Arg Asn Leu Tyr Phe Ile Asn Arg
1 5

<210> 236
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 236

Leu Arg Asn Phe His Tyr Val Asn Arg
1 5

<210> 237
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 237

Leu Arg Asn Phe Tyr Phe Ile Ser Gln
1 5

<210> 238
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 238

Leu Arg Asn Phe Tyr Phe Ile Ser Lys
1 5

<210> 239
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 239

Leu Arg Asn Phe Tyr Phe Ile Thr Lys
1 5

<210> 240
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 240

Leu Arg Asn Phe Tyr Phe Ile Gly Lys
1 5

<210> 241
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 241

Leu Arg Asn Phe Tyr Phe Ile Asp Lys
1 5

<210> 242
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 242

Leu Arg Asn Phe Tyr Phe Ile Glu Lys
1 5

<210> 243
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 243

Leu Arg Asn Phe Tyr Phe Ile Gln Lys
1 5

<210> 244
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 244

Leu Arg Asn Phe Tyr Phe Ile His Lys
1 5

<210> 245
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 245

Leu Arg Asn Phe Tyr Phe Ile Arg Lys
1 5

<210> 246
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 246

Leu Arg Asn Phe Tyr Phe Ile Lys Lys
1 5

<210> 247
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 247

Leu Arg Asn Phe Tyr Phe Ile Asn Glu
1 5

<210> 248
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 248

Leu Arg Asn Phe Tyr Phe Ile Asn Gln
1 5

<210> 249
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 249

Leu Arg Asn Phe Tyr Phe Ile Asn Lys
1 5

<210> 250
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 250

Phe Tyr Phe Ile Ser Gln Leu Thr Gly
1 5

<210> 251
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 251

Met Ser Tyr Asn Gln Leu Gly Glu Leu
1 5

<210> 252
<211> 9
<212> PRT
<213> Homo sapiens

<400> 252

Met Ser Tyr Asn Leu Leu Gly Phe Leu
1 5

<210> 253
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 253

Tyr Asn Gln Leu Gly Glu Leu Gln Arg
1 5

<210> 254
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 254

Gln Leu Gly Glu Leu Gln Arg Ser Ser
1 5

<210> 255
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 255

Leu Gly Glu Leu Gln Arg Ser Ser Asn
1 5

<210> 256
<211> 9
<212> PRT
<213> Homo sapiens

<400> 256

Leu Gly Phe Leu Gln Arg Ser Ser Asn
1 5

<210> 257
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 257

Glu Leu Gln Arg Ser Ser Asn Phe Gln
1 5

<210> 258

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 258

Ile Pro Glu Glu Ile Lys Gln Lys Gln
1 5

<210> 259

<211> 9

<212> PRT

<213> Homo sapiens

<400> 259

Ile Pro Glu Glu Ile Lys Gln Leu Gln
1 5

<210> 260

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 260

Ile Lys Gln Lys Gln Gln Phe Gln Lys
1 5

<210> 261

<211> 9

<212> PRT

<213> Homo sapiens

<400> 261

Ile Lys Gln Leu Gln Gln Phe Gln Lys
1 5

<210> 262

<211> 9

<212> PRT

<213> Artificial

<220>
 <223> synthetic

 <400> 262

 Lys Gln Gln Phe Gln Lys Glu Asp Ala
 1 5

 <210> 263
 <211> 9
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 263

 Leu Glu Lys Glu Asp Asn Thr Arg Gly
 1 5

 <210> 264
 <211> 9
 <212> PRT
 <213> Homo sapiens

 <400> 264

 Leu Glu Lys Glu Asp Phe Thr Arg Gly
 1 5

 <210> 265
 <211> 9
 <212> PRT
 <213> Artificial

 <220>
 <223> synthetic

 <400> 265

 Asn Thr Arg Gly Lys Glu Met Ser Ser
 1 5

 <210> 266
 <211> 9
 <212> PRT
 <213> Homo sapiens

 <400> 266

 Phe Thr Arg Gly Lys Leu Met Ser Ser
 1 5

 <210> 267

<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 267

Glu Met Ser Ser Arg His Leu Lys Arg
1 5

<210> 268
<211> 9
<212> PRT
<213> Homo sapiens

<400> 268

Leu Met Ser Ser Leu His Leu Lys Arg
1 5

<210> 269
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 269

Met Ser Ser Arg His Leu Lys Arg Tyr
1 5

<210> 270
<211> 9
<212> PRT
<213> Homo sapiens

<400> 270

Met Ser Ser Leu His Leu Lys Arg Tyr
1 5

<210> 271
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 271

Arg His Leu Lys Arg Tyr Tyr Gly Arg
1 5

<210> 272
 <211> 9
 <212> PRT
 <213> Homo sapiens

<400> 272

Leu His Leu Lys Arg Tyr Tyr Gly Arg
 1 5

<210> 273
 <211> 840
 <212> DNA
 <213> Homo sapiens

<400> 273
 acattctaac tgcaaccttt cgaagccttt gctctggcac aacaggtagt aggcgacact 60
 gttcgtgttg tcaacatgac caacaagtgt ctctccaaa ttgctctcct gttgtgcttc 120
 tccactacag ctctttccat gagctacaac ttgcttgat tcctacaaag aagcagcaat 180
 tttcagtgtc agaagctcct gtggcaattg aatgggaggc ttgaatactg cctcaaggac 240
 aggatgaact ttgacatccc tgaggagatt aagcagctgc agcagttcca gaaggaggac 300
 gccgcattga ccatctatga gatgctccag aacatctttg ctattttcag acaagattca 360
 tctagcactg gctggaatga gactattgtt gagaacctcc tggctaattg ctatcatcag 420
 ataaaccatc tgaagacagt cctggaagaa aaactggaga aagaagattt caccagggga 480
 aaactcatga gcagtctgca cctgaaaaga tattatggga ggattctgca ttacctgaag 540
 gccaaaggagt acagtcactg tgccctggacc atagtcagag tggaaatcct aaggaaacttt 600
 tacttcatta acagacttac aggttacctc cgaaactgaa gatctcctag cctgtgcctc 660
 tgggactgga caattgcttc aagcattctt caaccagcag atgctgttta agtgactgat 720
 ggctaattgta ctgcatatga aaggacacta gaagattttg aaatttttat taaattatga 780
 gttattttta tttattttaa ttttattttg gaaaataaat tatttttggt gcaaaagtca 840

<210> 274
 <211> 20
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic

<400> 274

Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro
 1 5 10 15

Arg Gly Ser His
20